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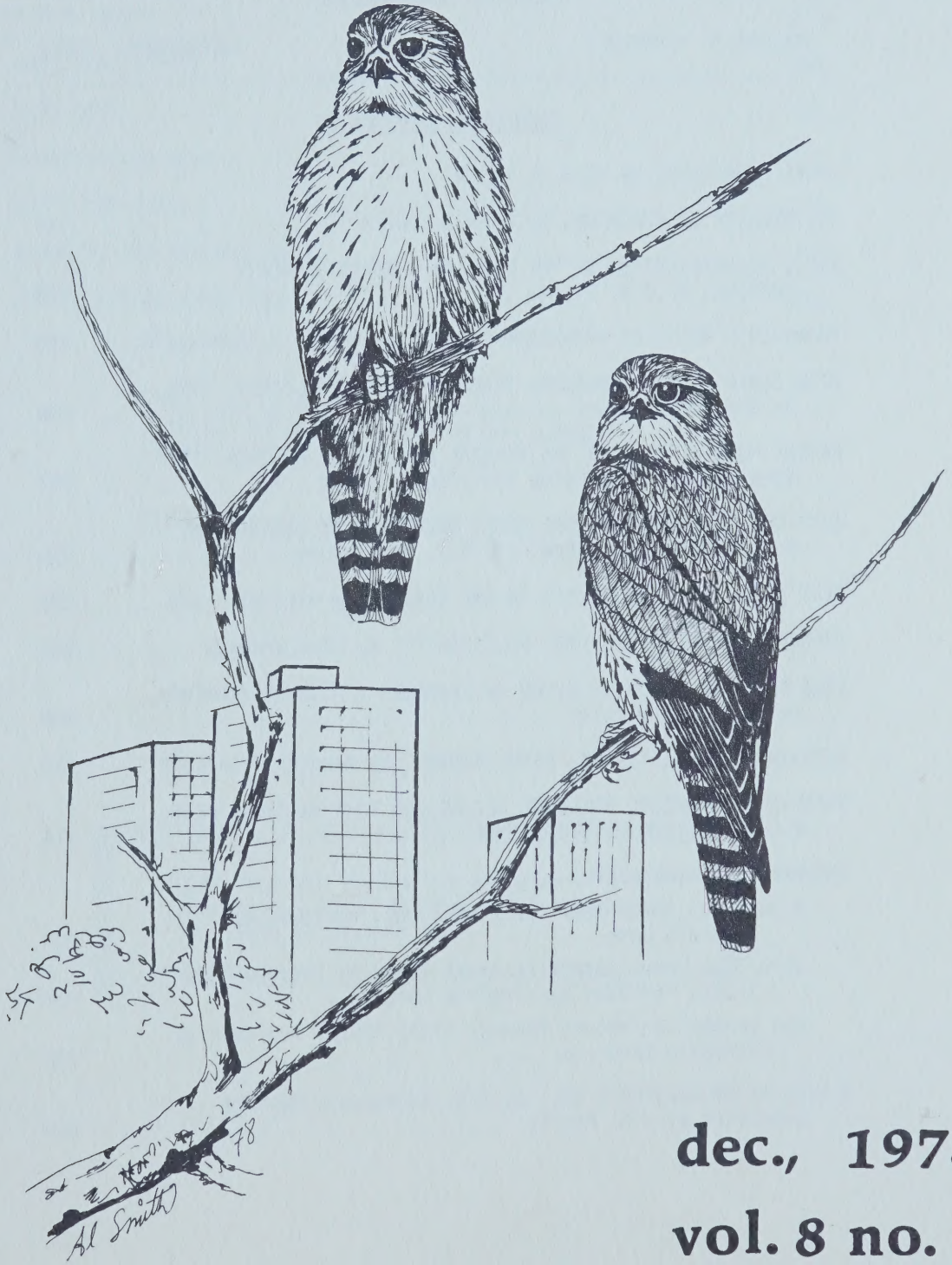

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THE MERLINS OF EDMONTON

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Every year the ornithological journal, American Birds, publishes the "Blue List", an annotated list of those species of birds which, in the opinion of observers across North America, "have recently or are currently giving evidence of population declines, either regionally or continent-wide" (Arbib, 1977). The 1978 Blue List (ibid.) includes the Merlin (*Falco columbarius*). Nine of ten observers from the Northern Great Plains favoured retention of the Merlin on the list. I agree with the dissenter; my observations in Alberta and those of Stuart Houston and Lynn Oliphant in Saskatchewan indicate that the Merlin is doing very well.

The Merlins of Edmonton are no exception; here, in a city of one-half million people, innumerable cats and dogs, three hundred thousand motor vehicles and hundreds of acres of concrete, one finds a high density of breeding Merlins and a large and regular wintering population far north of the normal winter range. The highest breeding density of Merlins in rural North America is seven pairs in 40 square kilometers in southern Alberta (personal observation, 1978). I found that the same area in Edmonton contained eight pairs. At least one Merlin has been recorded on all but two of the Edmonton Christmas Bird Counts since 1956. The 14 recorded on the 1976 Edmonton Count was the highest ever in Canada and the highest for that year in North America. Apparently then, the year-around requirements for a substantial number of Merlins can be found in Edmonton. In addition, certain behavioural adaptations allow for successful reproduction in spite of the large number of humans and domestic animals present in the city.

Before explaining just how Edmonton meets the Merlin's requirements, I will describe what the species' general requirements are. An open to semi-open habitat for foraging is the first need, since dense woods are shunned (Trimble, 1975). This preference is perhaps directly related to the Merlin's hunting technique, direct and rapid pursuit rather than attack from concealment (Fox, 1964). Secondly, there must be an adequate prey base within this habitat. In heavily-cultivated areas of southern Alberta, Merlins are absent due to a small prey base, even though all other requirements are met (Trimble, 1975; Hodson, 1976). A third requirement is breeding habitat consisting of woodlands, or more rarely cliffs, which provide inaccessible nest sites. In central Alberta a critical factor appears to be the presence of conifers, since all but one of the eighteen nests that I have seen have been in these trees. This may be a response to human disturbance

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as several earlier nestings have been in willow clumps or in aspen groves (Bent 1938; D. Dekker, pers. comm.). The final basic requirement is a nest site. On the northern fringes of the Boreal Forest, Merlins often nest on the ground. Further south they sometimes nest in cliffs or in cavities in trees, but by far the most commonly-used sites are the old nests of other birds, especially those of the crow family (Corvidae) (Bent, 1938; Trimble, 1975). All of the nests that I have seen in central Alberta have been in the old nests of the Common Crow (*Corvus brachyrhynchos*) or Black-billed Magpie (*Pica pica*). Therefore, there must be a regularly breeding corvid population to provide future nest sites as old nests disintegrate after a period of time.

I will now try to relate the present habitat conditions in the city to the general habitat requirements outlined above, and describe how these conditions might limit Merlin populations. The older portions of the city, with its open spaces and interspersion of trees and shrubs, can best be likened to savannah; the newer areas to grassland. In these respects the city somewhat resembles the natural foraging habitats of the Merlin. The few areas that are unsuitable for foraging lie in the river valley where many extensive tracts of woodland remain. Even here the development of golf courses and parks has improved foraging habitat by creating openings in woodlands.

On the basis of numerous prey remains which I have collected near nest sites, the House Sparrow (*Passer domesticus*) is the main quarry of the Merlin during the breeding season. Oliphant (1974) found that 90 per cent of the prey taken to one nest in Saskatoon also consisted of House Sparrows.

In the winter Bohemian Waxwings (*Bombycilla garrula*) and occasionally finches (Fringillidae) are important prey species. The occurrence of the North American all-time high of 15,047 Bohemian Waxwings on the same Christmas Bird Count as the afore-mentioned Canadian all-time high of 14 Merlins indicates the closeness of this predator-prey relationship. The waxwings themselves are an example of a species which is highly successful in adapting to the urban environment. The average number of waxwings recorded on an Edmonton Christmas Bird Count since 1956 is 3,200, while a rural count might log a few hundred. The city's large number of berry-producing trees is the reason for this success. The Mountain Ashes (*Sorbus* spp.) are the most important of these. There are as many as 25 Mountain Ash trees on some blocks, and there may be tens of thousands in the city as a whole.

In some years, Evening Grosbeaks (*Hesperiphona vespertina*), Pine Grosbeaks (*Pinicola enucleator*) and redpolls (*Carduelis* spp.) may be important prey species. Ornamentals and shade trees such as Manitoba Maple (*Acer negundo*) and Green Ash (*Fraxinus pennsylvanicus*), as well as an ever-increasing number of bird feeders attract large numbers of these birds. T.W. Barry once had 1,500 Evening Grosbeaks at his feeder near McKinnon Ravine. The fluctuation of numbers of both the finches and the Bohemian Waxwings may be important in determining the number of wintering Merlins.

Suitable breeding habitat for the Merlin is found in two areas: the river valley including adjacent ravines, and the uplands. On the south bank of the river their breeding habitat is continuous from the eastern to western city limits. However, on the north bank breeding habitat is restricted to ravines because the dry microclimate of south-facing slopes inhibits the growth of conifers. Man's alterations to the river valley have been both beneficial and deleterious. For example, the construction of freeways in ravines has removed some habitat suitable for breeding and may have cost the city a pair of Merlins. On the other hand, the planting of conifers in the river flats where conifer stands are generally lacking may have added a pair.

The upland breeding sites all contain planted stands of White Spruce (*Picea glauca*) which, at about 15 metres, are tall enough to habour the corvid nests suitable for Merlins. Only six sites, located mainly in parks and cemeteries, are suitable for breeding, and five of these are usually occupied. Because river valley Merlins have successfully nested within 1.5 kilometres of each other and because upland sites are much further apart than this, it would appear that the lack of suitable sites may limit the number of breeding Merlins.

The large number of crows and magpies in Edmonton provide the nest structures required by Merlins. Eleven of fourteen* Merlins nests were in old crow nests, and three were in old magpie nests. All of these crow nests were in spruce trees at a minimum height of ten metres, two of the magpie nests were in spruce trees at 10 and 14 m and the third magpie nest in an aspen tree at six metres. Considering the abundance of magpie nests low in deciduous trees, it appears that the protective advantage of such sites (ie. a covered nest) is far outweighed by the advantages of the crow nests in spruce trees which are higher and partially hidden by evergreen boughs. Theoretically, then, magpie nests high in spruce would be the preferred sites. More studies are needed to determine how the abundance and nest preferences of these two corvids affect nest availability before speculating on Merlin nest preferences.

Although Edmonton generously meets the habitat requirements of Merlins, this advantage cannot be translated into a viable population without a drastic change in Merlin behaviour. Rural Merlins will exhibit aggressive responses to humans within 1.5 kilometres of the nest (Trimble, 1975). If a pair of Edmonton Merlins behaved similarly, they could spend most of their time defending their territories and would undoubtedly fail to breed. Unless the nest tree is actually climbed, Merlins in the city generally ignore humans (and pets). In the event the tree is climbed, defence is just as strong as at rural nests.

The excellent breeding conditions and the behavioural adaptations combine to allow for a large number of successful breeding pairs in the city. The preliminary results of my studies indicate there are about 20 pairs of Merlins in Edmonton. As I do not climb nest trees until

*Some of these nests were used more than once.

the young are ready to band, I do not know the exact breeding success, but ten successful Edmonton nests fledged an average of 3.8 young. The 19 nests I have found in southern Alberta fledged an average of 3.6 young.

As long as the Merlin's requirements continue to be met and barring any changes in behavior or reproductive success, the future of Merlins in Edmonton appears bright. Of course rural Merlin breeding habitat will be destroyed as the city enlarges, but new breeding habitat will eventually be recreated in the wake. This process will take at least 35 years, which is the approximate age of the youngest tree in which I have found a Merlin nest. At present there are several potential breeding territories in various stages of development, so an ever-increasing number of Merlins should grace our rapidly-changing skyline (if they don't read the "Blue List").

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OVERHEARD. . .

"The aim of science should be to take away the mystery from natural phenomena, but not to take away the wonder."

- *F. Fraser Darling*

FIELD IDENTIFICATION OF THE WESTERN SHRIKES OF NORTH AMERICA

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During summer (June-August) a shrike observed in southern Canada is certainly a Loggerhead (*Lanius ludovicianus*) (Godfrey, 1966). In spring and autumn all shrikes should be identified carefully. Salt and Salt (1976) indicated the Loggerhead arrives in Alberta during the last week of April just after the Northern Shrike (*L. exubitor*) has gone north; and they have usually gone south by the end of August at least a month before Northerns arrive. However, Sadler and Myres (1976) show the Loggerhead has been reported regularly in March in southern Alberta when the Northern Shrike is still around. They also show reports of the Loggerhead remaining in southern Alberta until October or November, after the Northern Shrike has arrived. Sadler and Myres (1976) note these reports could reflect some confusion in identification.

To the birder familiar with these two shrikes in the field, they are not exceedingly difficult to tell apart (ie. if they are sitting side by side!). Field guides emphasize the larger size and paler coloration of the Northern Shrike. This is analogous to saying something is sweet when you have never tasted anything sour or bitter. The problem is to be able to correctly identify an individual to species when it is without the company of the other species. Going one step further, it is very useful to be able to identify the age and sex class of the individual without collecting it. These are the two problems I will address in this article.

Like most field guides the bird field guides of Robbins et al. (1966), Peterson (1961) and Wood (1969) often greatly simplify the identification of some species. Illustrations are usually done from one or few specimens. The results of Zimmerman (1955) indicated the identification of eastern shrikes is not nearly as clear cut as field guides make it out to be. Because of the different subspecies and/or populations of shrikes in western North America I decided to undertake this study. In order to be certain of the identifying characteristics of western shrikes, I mailed data forms to 20 natural history and university museums in western North America. The forms contained specific questions related to important identifying characteristics of shrikes. Twenty-five percent of the forms were returned. A total of 88 specimens composed of 34 Northerns and 54 Loggerheads from ten states, British Columbia, Alberta and the Northwest Territories provided the date for this analysis. Unfortunately, the number of juvenile specimens is small and therefore limits the reliability of the interpretation of juvenile characteristics.

I would like to thank J.M. Wiehe, J.J. Dinsmore, H.L. Gunderson,

C. Messenger, W.E. Roberts, and N.A. Din for their assistance in data collection.

FIELD IDENTIFICATION

Breast Vermiculations: These may be present on either species, but require close observation with the aid of a 20X spotting scope in most cases. They were found on all Northern Shrike specimens, varying from indistinct (one adult female) to distinct. Bent (1950) and Zimmerman (1955) indicated wear, soiling and moulting affect the visibility of vermiculations. Immature Northerns are washed with shades of brown and are so heavily barred they are easily identified. The situation is not so simple with Loggerheads. Most bird guides show adult Loggerheads with clear breasts and juveniles with light vermiculations. However, I found 25 per cent adult male and 45 per cent adult female Loggerheads had indistinct vermiculations and 50 per cent of the immatures had none.

Bill Color: Bird book illustrations often show the Northern Shrike with a light color at the base of the lower mandible and the Loggerhead with a totally black upper and lower mandible. I found the pale color at the base of the bill is more prominent in Northerns, but is also present on Loggerheads. All-black bills were predominant among Loggerheads, but were also found on Northerns. Zimmerman (1955) found bill color in shrikes changes with the seasons. I found the Northern Shrike has a black bill in spring-summer and a light-colored base in fall and winter.

Throat Color of Immatures: The Northerns have a definite gray-brown colored throat patch similar to the general underbody coloring. The Loggerheads have a distinguishing white throat patch contrasting with the darker underparts.

White Uppertail Coverts (Rump Patch): On the average, Northern Shrikes have a much larger and more white-colored rump patch than the Loggerheads, but some Loggerheads have a larger white patch than some Northerns.

White Eye Spot: Although not shown or mentions in common bird field guides, Zimmerman (1955) found only Northerns had a small white spot below the eye (better developed in females) in eastern North America. Interestingly, I found only the Northern Shrike specimens from British Columbia had a distinct white eye spot, while two other male Northerns had an indistinct white eye spot.

Facial Feathering: The black mask of the western shrikes varies tremendously in size and shape both intra and interspecifically. Field guides often distinguish the two species by indicating the adult Loggerhead has a black mask that extends in front of the eye and well onto the forehead; whereas the adult Northern has a mask reaching only to the base of the bill. However, I found 14 per cent adult male and 30 per cent adult female Loggerheads had a mask very similar to the Northern. There was no distinguishing characteristic of the mask that could accurately separate adult males from females in either species. Godfrey (1966)

Figure 1. Adult male Northern (right) and Loggerhead Shrike, showing differences in width of mask and size of bill. (Adapted from Zimmerman 1955)

stated the mask of the immature Northern is confined to the area behind the eye. This restricted mask also occurred in 29 per cent adult male and 50 per cent adult female Northerns. Godfrey (1966) stated immature Loggerheads have no black on the forehead like adults. I found this true for immature males, but not immature females.

DISCUSSION

The use of specimens for the study of identifying characteristics of living birds has some disadvantages. The individual preparation and care of specimens varies from museum to museum and certain morphological features may be distorted or mutilated. Soft body parts of birds such as the bill may be subject to long-term color changes, but I did not find any correlation in this study. The collection of data based on the interpretation of several different competent museum curators also may have distorted the final results of this analysis. However, the advantages of utilizing a large quantity of known (sex-age) specimens in the hand, from a large geographic area, far outweigh the disadvantages.

The "typical" Northern Shrike is much different from the "typical" Loggerhead Shrike (Figure 1). However, it is apparent from this analysis that no individual shrike can be identified in the field by any single characteristic. The results also indicate there is no set of field characteristics that can distinguish the male and female adult of either species, or the sex of immature Northerns. Following is a key (flow chart) of the identifying characteristics that should be used in the identification of any western shrike (Figure 2). The key is only partly complete in that it deals only with morphological features. Behavioral differences between the two species have been discussed in general by Zimmerman (1955) for eastern subspecies and in several bird books and field guides. More behavioral information is needed on the western shrikes to enhance the usefulness of the morphological key.

NOTE: A shrike in southern and central Alberta from December to February is undoubtedly a Northern and, from June to August, a Loggerhead.

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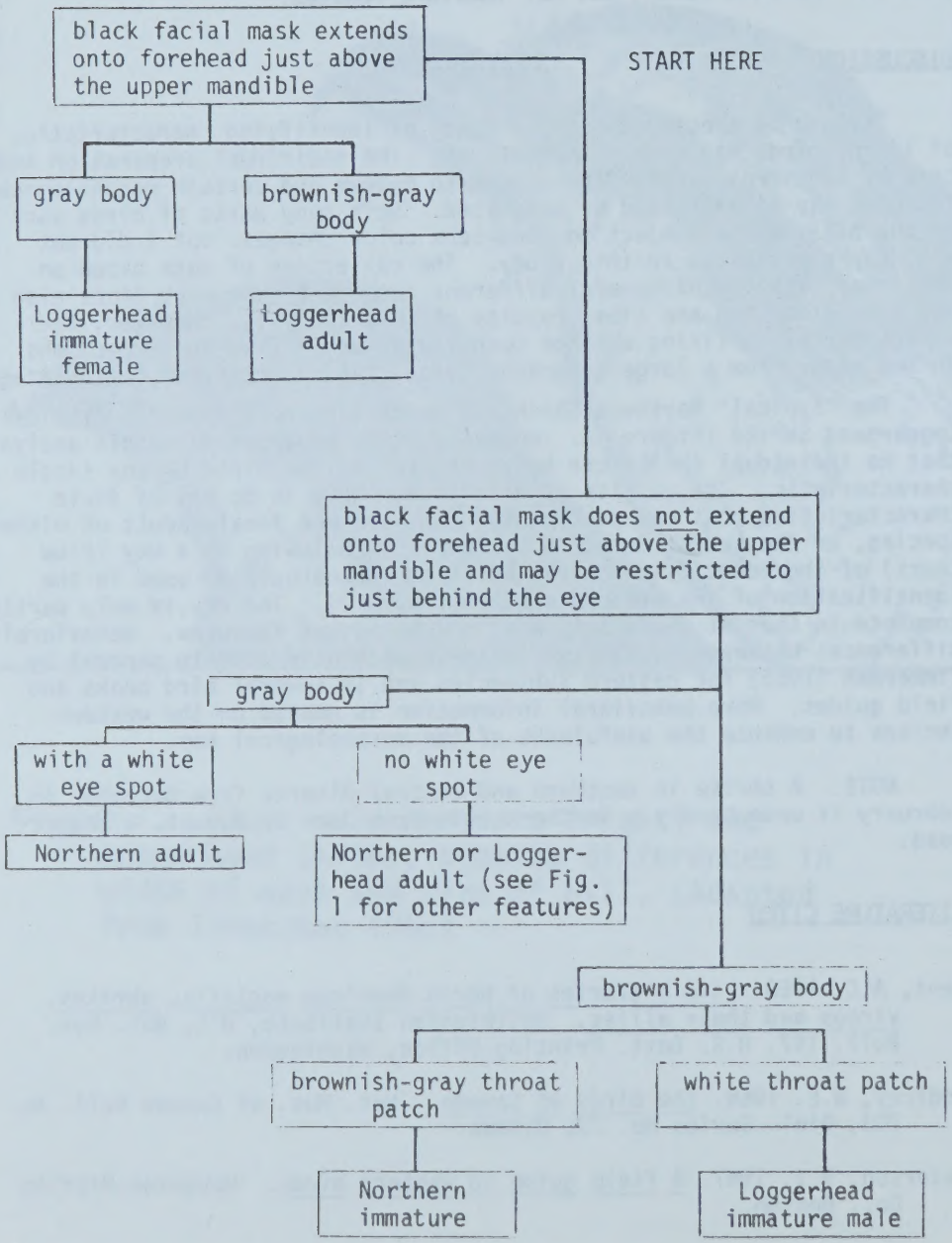
Figure 2. Key to the field identification of the western shrikes.


black facial mask extends onto forehead just above the upper mandible
START HERE
gray body
brownish-gray body
Loggerhead immature female
Loggerhead adult
black facial mask does not extend onto forehead just above the upper mandible and may be restricted to just behind the eye
gray body
with a white eye spot
no white eye spot
Northern adult
Northern or Loggerhead adult (see Fig. 1 for other features)
brownish-gray body
brownish-gray throat patch
white throat patch
Northern immature
Loggerhead immature male

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FRANKLIN'S GULLS AT HAMBURGER STANDS

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On 2 July 1978 I was riding with Brian Marten and John Shanks when I noticed a row of Franklin's Gulls (*Larus pipixcan*) perched on a roof of a building next door to a hamburger stand at Bonnyville, Alberta. In the early evening, we visited another hamburger stand at Grande Centre, where 14-25 Franklin's Gulls were in sight on a neighboring roof as long as we stayed. Two Ring-billed Gulls (*L. delawarensis*) were also present. Whenever people dropped food or placed their refuse in garbage cans, two or three gulls flew down to investigate. I have frequently observed gulls at picnic stands, parking lots and fast-food outlets where people tend to drop refuse carelessly. These observations have been of Herring (*L. argentatus*), Ring-billed, California (*L. californicus*), Western (*L. occidentalis*) and Glaucous-winged Gulls (*L. glaucescens*), but not Franklin's Gulls. Therefore, I was interested to note the behavior apparently well-developed at two locations within one general area, and would be interested to know how widespread the habit is within Alberta.

Gulls are notoriously adaptable in their feeding habits, and these observations do not surprise me. Roberts (1900) remarked that Franklin's Gulls eat "that which is nearest at hand and easiest to get provided it is at all suited to its wants". The habit of following the plough, so characteristic of the prairies, was well-developed before Bent (1921) wrote his account of this species, not long after much of the prairie region was settled. Because of this habit, they have long been recognized as species beneficial to agriculture (DuMont, 1940), not to mention the delightful companions they provide to the lonely farmer.

With the rapid development of fast-food drive-in establishments and the increased popularity of wayside picnic sites, the rapid adaptation by gulls to another easy source of food comes as little surprise. In Florida Laughing Gulls (*L. atricilla*) are even known to defend moving territories around picnickers on beaches (Jutro, 1975).

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HIGHLIGHTS OF BIRD BREEDING SEASON, SOUTHERN ALBERTA, 1978

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by Rudi Butot
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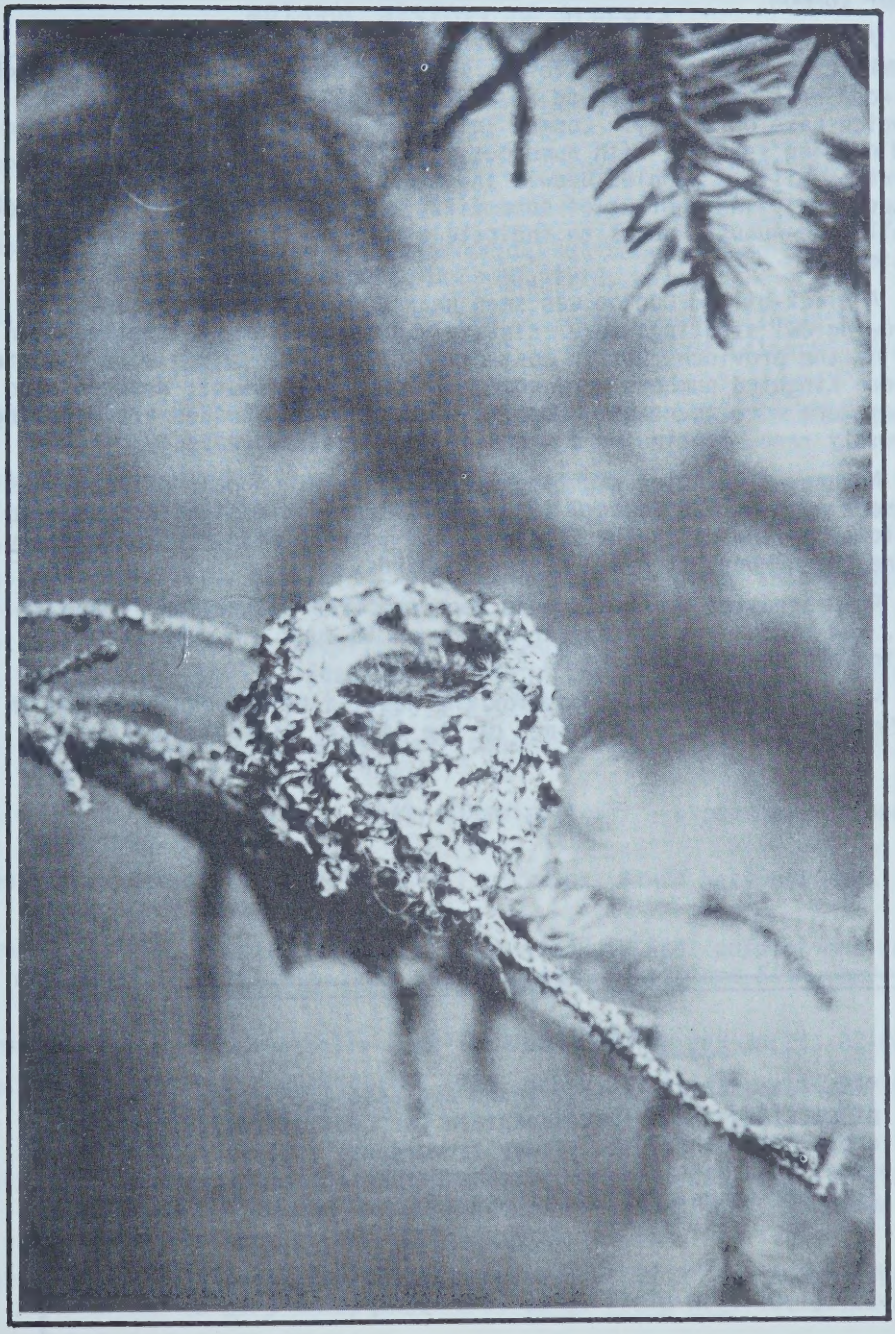
Early summer was warm and pleasant, with lots of sunshine and little precipitation. Clouds and thundershowers prevailed during the middle of the nesting season, with somewhat above normal temperatures bringing the season to a close. Water levels were better than they had been in the previous few years, but recovery to pre-drought levels did not occur until after the nesting season.

A Common Loon with one young was seen on a small lake some five miles north of Turner Valley early in August. Nesting grebe reports were few, although Pied-billed Grebe sightings were up somewhat over previous years. Waterfowl numbers, especially young, seemed extremely low this year.

Red-tailed and Swainson's Hawks were numerous in our area this summer. Several fledged Swainson's Hawks were reported from near Brooks on 9 July, and a report from Orion mentioned two small downies in a nest on 7 July. What was believed to be a Peregrine Falcon was repeatedly



Rufous Hummingbird nest - David Ealey

seen in Canmore during May and early June. Kestrel sightings were rather common.

A White-faced Ibis was reported on several occasions from Pakowki Lake. Four Piping Plovers were reported from near Vale, which included what was believed to be a fledged young of the year at Chappice Lake on 8 July. Common Snipe and Upland Sandpipers both had good nesting seasons, with numerous sightings throughout southern Alberta. Willet, Marbled Godwit and Avocet numbers were low in the Calgary area. A sighting of some fifty Long-billed Curlews near Lake Newell, mid-August, seems to indicate a good nesting season for that species.

A Black-billed Cuckoo was seen near Buffalo Lake on 23 July. Burrowing Owl sightings were relatively numerous for the southeastern part of the province, but in most cases only single birds were reported. Eastern Kingbird numbers were somewhat lower than usual; Western Wood Pewees were more abundant. Reports of Loggerhead Shrikes are becoming extremely rare, continuing a trend of the last few years.

No unusual warbler sightings were reported. A pair of Bobolinks was seen west of Nanton on 7 June. Northern Oriole sightings seem to be slowly moving up in the Calgary area, year by year. Unfortunately, so are the numbers of Brown-headed Cowbirds.

Rose-breasted Grosbeaks were reported from Calgary on 11 and 30 June, and three were heard near Sundre on 18 June. A male Lazuli Bunting was seen in Calgary on 3 July.

More detailed tabulations for the nesting season can be found in the September and October issues of The Calgary Field Naturalist.

OVERHEARD. . .

"American farmers thirty years ago used 2,265 tons of pesticides and lost seventeen per cent of their crops before harvest. Today farmers use twelve times more pesticides - yet the percentage of crops lost before harvest has almost doubled."

Environmental Protection Agency, from Common Sense, Vol. No. 1, Sept. 1978

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GRAY-CHEEKED THRUSH IN THE ROCKY MOUNTAINS OF ALBERTA

by D.J. Haddow, M.A. Skeel and K.J. Van Tighem
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The Gray-cheeked Thrush (*Catharus minimus*) is considered an uncommon migrant in the province of Alberta, although there is evidence that the species may breed in the Caribou Mountains of northern Alberta (Salt and Salt, 1976). The usual habitat of the species is open coniferous forest of the sort which occurs at the ecotone between the boreal forest and the arctic tundra.

On July 13, 1978, five field workers with the Canadian Wildlife Service heard a Gray-cheeked Thrush singing in tree islands of subalpine fir (*Abies lasiocarpa*) adjacent to Amethyst Lake in the western portion of Jasper National Park, W52042', N118015'. The peculiar descending song was not heard again during subsequent evenings, but there is a previous observation on file for the same location of a singing Gray-cheeked Thrush on July 14, 1976 (A. Strepniewski, Parks Canada; pers. comm.).

The timberline vegetation of the Canadian Rocky Mountains is physiognomically not unlike that of the boreal/arctic ecotone and the possibility that Gray-cheeked Thrushes may occur here occasionally is worthy of consideration. Clarke & McTaggart-Cowan (1945) listed the Gray-cheeked Thrush in a report on the birds of Banff National Park, describing the species as being "Common at high altitudes and evidently fairly well distributed. Where it occurs it more or less replaces the Olive-backed Thrush. . .". The authors refer to three specimens collected in Banff, two of which are dated mid-June.

It is possible that future field work at high elevations early in the singing season - at which time the presence of late snow often inhibits field work - may reveal the Gray-cheeked Thrush to be a more regular inhabitant of the timberline forests of the Rockies than is commonly believed. However, intensive field work conducted over the past three years in Banff and Jasper by the Canadian Wildlife Service has failed to produce more than this single record (Holroyd, et al., 1978; Karasiuk, et al., 1978). It might be interesting, then, to speculate on what conditions may have been responsible for changing the status of the Gray-cheeked Thrush from "common" to virtually unheard-of in the Rocky Mountains of Alberta.

We invite observations and comments from interested readers.

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NEST USED BY THREE SPECIES IN ONE SEASON

by Virginia Lang
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On September 26, 1978, a lone adult Barn Swallow's three young left their nest. This represents the latest Barn Swallow fledging date on my farm, some sixty miles northwest of Edmonton, in the five years I've lived there.

Of particular interest is the nest. Built last year by Cliff Swallows, it is in the rafters of the entrance to my basement. Six-foot rock walls and carragana shrubs border the entrance.

This spring Cliff Swallows returned to my farm and commenced nesting as usual. The adult Cliff Swallows using this particular nest hatched young and were feeding them. Near fledging time I was away for several days. Upon my return, I discovered a pair of House Wrens now occupied the nest. I don't know whether the wrens dispossessed the swallows, or whether the swallows fledged their young normally. The House Wrens subsequently fledged three young.

After the wrens departed a pair of Barn Swallows took up residence in the nest. They incubated their eggs and hatched young. Shortly after hatching, the weather turned cold and rainy, and one of the adults disappeared. The remaining adult fledged the young. The young and adult left the immediate vicinity the following day, September 27, around noon, two to three weeks after the departure of the rest of the Barn Swallows which had frequented my farm.

COMMENTS ON SNOWY OWL PREY SELECTIVITY

by Alan Kennedy
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This note concerns the recent article published in Alberta Naturalist (Vol. 8 No. 1) entitled "Interesting Addition to the Diet of the Snowy Owl?".

Mr. Bogaert's discovery of Short-eared Owl remains in a Snowy Owl pellet is unusual, but could not be considered an addition to the known diet of this species. Published records as early as 1915 indicate that Short-eared Owls are preyed upon by Snowy Owls. I refer readers to the work of A.C. Bent, entitled, "Life Histories of North American Birds of Prey" for details. Further, W. Campbell (Journal of Wildlife Management, 1978, Vol. 42 (1)) recently reported Short-eared Owl remains in Snowy Owl pellets collected from coastal British Columbia. These accounts stress that this prey item is very limited; therefore, this recovery in a single pellet is rare.

Further comments that may be pertinent to this article relate to the certainty that the pellet analysed was in fact from a Snowy Owl. Owl hunting territories may change over time and activity periods overlap considerably between Snowy Owls, Great Horned Owls and Short-eared Owls. Also, we have no idea of the age of the pellet; it may have been from a Great Horned Owl from some time previous.

Differentiation of the present owl pellet by physical characteristics may prove more accurate than Mr. Bogaert's classification by behavioral speculation. The diameter and length of Snowy Owl pellets have been determined by Watson (Ibis, 1957, Vol. 99: 452). The dimensions reported by Mr. Bogaert are slightly large for a Snowy's pellet.

Finally, I would like to add to Mr. Bogaert's hypothesis on possible hunting methods implemented by Snowy Owls. Biologists studying Snowy Owl food habits agree that size and weight of prey are most important in prey selectivity. The amount an owl can "catch and carry" (Campbell, 1978, page 192) restricts the prey that can be taken. Whether the prey flys or runs directly in front of the owl, therefore being easily noticed, does not seem to be that important, if it is not within this specific

size range. Short-eared Owls are well within this range and therefore may be sought as prey by Snowy Owls.

Prey availability is also very important. My studies indicate that Snowy's live almost exclusively on lemming while on breeding ranges in the Arctic. However, in southern wintering ranges Snowy Owls are reported to be very versatile in their diet and will hunt many species of avian, mammalian and occasionally reptilian prey. The Snowy Owl, therefore, does not exist entirely on rodents as many people believe.

The title and introductory paragraph of Mr. Bogaert's article prompted me to write the preceeding comments. I hope they will stimulate discussion and aid in the interpretation of this interesting discovery.

OVERHEARD. . .

Plants can carry out extensive cross-country flights. A range of even several hundred miles is possible. For example, a grain of birch pollen carried up by warm air currents to a height of 6,000 feet will sink so slowly because of its lightness and large surface area that a Force Three wind would carry it 250 miles before it reached the ground.

from Nature, Mother of Invention, by Felix Paturi

LAKE NEWELL: COLONIAL BIRDS IN JEOPARDY - FURTHER COMMENTS

by D.V. Chip Weseloh
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I read with much interest and sentimentality Wayne Nordstrom's article entitled "Lake Newell: Colonial Birds in Jeopardy" (Alberta Naturalist 8(2): 107-111). I well remember those two days in early May 1977 when he and I censused that Ring-billed Gull colony. On reading the article, a couple of small points seemed worthy of further comment and one small correction is necessary.

The correction first. While the Lake Newell Ring-billed Gull colony is the largest in southern Alberta, it is only second largest province-wide. The largest colony, by a factor of nearly two, is the one on Miquelon Lake, southeast of Edmonton. On 18 and 19 May, 1977, Joel Duncan, Al Wisely, Rod Burns and I censused this colony and found it to contain 10,087 Ring-billed Gull nests and 1,848 California Gull nests (±5 per cent). As a matter of interest, at the bottom of this note (see Table 1), I have listed the sizes of several Ring-billed and

Fleeting glimpse of author in his native habitat.

TABLE I. SIZES OF SOME CALIFORNIA AND RING-BILLED GULL COLONIES IN ALBERTA[1]

Location	Number of Nests	
	California Gulls	Ring-billed Gulls
St. Mary's Reservoir	1,580	856
Stirling Lake	962	218
Murray Lake	151	747
Keho Lake[2]	1,459	4,296
Frank Lake sloughs	311	1,017
Craighdu (Irricana) Reservoir	1,205	4,812
Lake Newell Reservoir	565	6,091
Dowling Lake[2]	824	5,184
Buffalo Lake[2]	952*	2,000±*
Joseph Lake	239*	0*
Miquelon Lake	1,848	10,087
Chip Lake	1,240	249*

1. Data from Weseloh, D.V., S. Brechtel and R.D. Burns. 1977. Recent population changes in Double-crested Cormorants and California and Ring-billed Gulls in Alberta, Canada, with a note on White Pelicans. Proc. Colonial Waterbird Group, pp. 10-18; and author's unpublished data.

2. Figures are totals from two insular nesting colonies on each lake.

* 1977 census, all other 1976.

Ring-billed Gulls on nesting colony.

California Gull colonies which Rod Burns and I censused while I was at the Provincial Museum.

Other comments are now in order. Readers will notice in Wayne's article that on the Lake Newell census of 16 May 1976 6,091 Ring-billed Gull nests were tallied, whereas on the 9-10 May 1977 census we recorded 5,232. One could easily come to the conclusion that the colony had decreased by 850+ nests. This is not necessarily the case. In comparing census figures of gull colonies from one year to the next or subsequent years, it is absolutely imperative that one consider the stage of the colony within the laying (nesting) cycle at the time of the census.

A census made relatively early in the nesting season is not directly comparable with one made during or after the peak of egg-laying as fewer nests and clutches will have been initiated.

By straight calendar time the 1977 census was one week earlier than the 1976 census (9-10 May vs. 16 May). My notes for the 1977 census indicate that had time not been a factor it would have been better to have waited several days to insure maximum nesting on the Lake Newell colony. In conclusion, I would say that given the differences in the 1976 and 1977 census dates, one can not validly conclude that the Lake Newell colony had decreased between those years. Rather, in my estimation, the colony would appear to have been stable.

ALBERTA NATURALISTS: DR. HENRY GEORGE

by Dorothy Broadbent
R.R. #4
Red Deer, Alberta

Dr. Henry George was one of Alberta's earliest white naturalists. He founded the first naturalists' organization in the Province, The Alberta Natural History Society, with an unrecorded number of branches in various parts of Alberta. In 1905 he opened his natural history museum in Innisfail. Kerry and Marjory Wood have some of Dr. George's old records in their possession and have kindly loaned them to me. They make interesting reading, although you may not agree with the philosophy of the early collector-type naturalist.

The first one of the series is taken from the Innisfail Standard of 1898, entitled "Birds of the Red Deer District".

"Order Raptors

The Eagles

The Golden Eagle, *Aquila Chrysaetos*
The Bald Eagle, *Halioeetus Lencocephalus*

Amongst Eagles in this district of Alberta we see specimens of both the above grand birds, but my personal observations are very few as the Eagles are scarce.

The first, or Golden Eagle, is the rarest one of the two, being more frequent in the foothills and mountains than in this part, but several specimens have been shot quite near, both old and young ones, therefore they must nest somewhere around. Everyone knows the Golden Eagle when he is seen, although other eagles are often confounded with him especially the Sea Eagle and the Imperial Eagle. This majestic bird dwarfs our largest hawks and buzzards; it generally nests on the edges of cliffs or in very high trees; its eggs are large and beautifully marked brown and lilac on a whitish ground. I have one specimen in my collection that is beautifully marked; in the economy of nature this bird duly plays its part; it lives on mammals and birds chiefly on the larger sized ones such as fawns, lambs, hares, grouse, ducks, geese etc. and only when greatly pressed by hunter will it eat putrid flesh. In parts where wild game is scarce this bird will prey on domestic animals and birds, and on some large sheep ranches in the United States it is a great scourge; but up here it is so uncommon that I think the farmers should refrain from destroying the Golden Eagle as it is such a large and beautifull bird and such a conspicuous object in the landscape wherever it appears. It is very fierce and courageous in defence of its young and eggs, and it will defend its belongings to the last gasp.

The Bald Headed Eagle or Bird of Washington

It is by no means uncommon to see this bird in the drives near our village; the least observant will pick it out at once. I have often pulled up my horse when driving to watch the beautifull gyrations of this noble bird and noticed the supreme indifference it displays towards the numerous Red Rails and Swainsons that set up such a disturbance when it appears and their feeble efforts to drive him away, although they take great care not to come to very close quarters. The beak and cere of the Bald Headed Eagle is a rich yellow, the head and tail pure white, the wings and the rest of the body are brownish; the eye is yellow and very fierce and the measure is from nine feet and more from tip to tip of the wings.

On my first drive to Pine Lake here I saw my first eagle's nest. I knew it to be one at once from the large size. There are many old nests around this lake, but the birds nearly always to be seen near, nest away from the lake now, but not so very far Mr. Windham took a nest of two eggs last year. I have never had the chance to get to their nests to obtain their eggs myself although I know of several places up river where they nest in very high trees, it is a tremendous hard nest to get at the contents when you arrive there; unlike the Golden Eagle they do not seem to mind when you take the eggs; soaring not so far away but seldom attacking the robber.

They feed on the same things as the Golden Eagle, but are much more partial to fish, and in the lake above mentioned Pike simply swarm.

Their eggs are pure white, very round in shape, and about the size of that of a wild goose.

There is a nest here on the river bank on a tree overhanging the water, in 1892 the eagles nested there, but the workmen at the mills took the young and the eagles left the nest, but in 1895 a wild goose brought up it's young in the same nest.

Though the bird undoubtedly does some harm I think it might be spared as it is not numerous and if wantonly destroyed might soon leave the neighborhood altogether."

OVERHEARD. . .

"Hope and the future for me are not in lawns and cultivated fields, not in towns and cities, but in the impervious and quaking swamps. . ."

Thoreau

SHARP-TAILED GROUSE BREEDING RECORD FOR YOHO NATIONAL PARK, B.C.

by Kevin J. Van Tighem
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At 4:15 pm on July 29, 1978, while driving east on Highway #1 through Yoho National Park, I observed a small group of birds on the road one mile west of the Ottertail River bridge. Two flushed as I slowed, then another, and thinking that there were no more I accelerated, only to have a fourth bird fly directly against the car and kill itself.

I stopped and picked up the victim and was surprised to find that it was a juvenile Sharp-tailed Grouse (*Pedioecetes phasianellus*). The flock contained five birds, all evidently only recently fledged, and no adult bird was seen, although it may have flushed as I passed.

Sharp-tailed Grouse have not been previously reported in Yoho National Park (Wade, 1977), nor have they been observed in adjacent parts of Banff during recent years (G. Holroyd, CWS; pers. comm.). In three years experience in the Columbia River area southwest of this area and in the Kootenay valley southeast of here, I have never encountered Sharp-tailed Grouse before. The occasional occurrence of a vagrant bird in the Rocky Mountains might be expected, but the presence of a newly-fledged family group is less easy to account for.

The birds were frequenting the edge of mixed Douglas fir/lodgepole pine/aspen forest when I encountered them. The specimen was turned over to the park naturalist for the park collection at Yoho National Park headquarters, Field, B.C.

I would appreciate hearing from any readers who have seen of heard of Sharp-tailed Grouse in the area of Golden and Field, B.C., and Banff, Alberta.

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Sharp-tailed Grouse photograph by Dave Moyles, Brooks, Alberta

NATURALISTS' BOOKSHELF

A GUIDE TO NORTH AMERICAN BIRD CLUBS

1978. Jon E. Rickert. Avian Publications Inc., P.O. Box 310, Elizabethtown, Kentucky, 42701. 565 pp. $15.00

Reviewed by Virginia Lang

I have never been struck by the idea that "what this country needs is a good directory to bird clubs". However, after reading this book (as best as one can "read" a directory) I can see many pluses beyond the initial negative of a steep purchase price ($15.00).

The area covered includes the United States, Canada, the Bahama Islands, Belize, Bermuda, Costa Rica, Dominican Republic, Guatamala, Jamaica, Mexico, Panama, Saint Pierre and Miquelon, and Trinidad and Tobago.

Each state/province/island is prefaced with a map showing the locations of all clubs. Either the club's permanent mailing address or two members are listed. Information on meeting dates, time, location, field trips, publications and membership/subscription costs are provided, as well as names, addresses and phone numbers of several "local keeners".

The obvious drawback of the concept is that much of the information will be quickly outdated, probably within about five years, as people move and clubs fold. However, the author has done his best to provide enough contacts in any given area that the user will likely be able to get in touch with at least one person listed.

If you are interested in birds, if you travel, if you would like to publicize any particular study you are involved with, or if you like to get lots of "birdy" mail and don't mind paying for subscriptions, this is a book for you.

VERMILION LAKES, BANFF NATIONAL PARK: AN INTRODUCTORY STUDY

1978. Bow Valley Naturalists (with the support of Parks Canada). 68 pp. $2.50 available from the Bow Valley Naturalists, Box 1693, Banff, Alberta, TOL OCO.

Reviewed by Virginia Lang

"Vermilion Lakes" is the result of a cooperative study of a small (440 hectares), biologically diverse area near Banff conducted by the Bow Valley Naturalists with cooperation from Parks Canada. The area has been designated as an "interpretive unit" by Parks Canada.

The proof-readers are to be commended. "Vermilion Lakes" is not

entirely free of typos (ie. "farily" rather than "fairly", p. 45) or minor errors (ie. "Widgeon" instead of "Wigeon", p. 40), but the incidence hardly merits point-by-point enumeration. Grammar and readability are generally good, although a free hand with commas is no remedy for overly long sentences. The layout is pleasing. The text is interspersed with good quality, pertinent photographs, drawings and maps. The maps could have been more useful, however, had lakes and other areas cited by name in the text been more clearly identified, and had scales been consistently used. Printing quality of my copy is good, photographs are clear, and the size of the booklet is comfortable. Overall, "Vermilion Lakes" authors have managed to avoid the "low (or no)-budget, amateur" look, and the result is an impressive, yet unpretentious booklet.

The text opens with a lengthy, sometimes hard to comprehend, poem about the area written by Jon Whyte. In the introduction, the study methods and objectives are explained, followed by two pages of recommendations to Parks Canada relative to future development of the area. The recommendations seem out-of-place, and might have been better placed just before the annotated lists.

The next section, "Human History and Recreational Use", is interesting, appears well-researched, and is illustrated with excellent photographs dating from 1887. Man's early activities in the area are documented: railroad and road construction, grazing cattle, harvesting hay, mosquito control (using every method from coal oil to dynamite to the introduction of mosquito-eating fish from Florida); intensive fish stocking; and, in one year, rotenone poisoning to eliminate 'coarse' fish species. Current recreational use is then outlined.

The discussion of geomorphology provides the reader with both a general background of water/land interactions, and specific data relative to the study area. For example, "alluvial fan" is defined, and we are told how they are formed. A map showing the location of alluvial fans in the study area is provided.

Under the heading "Vegetation" there are brief descriptions of the plant communities of the area, and an annotated list of vascular plants. This list includes Latin and common names, abundance (occasional, frequent, abundant) and where the species can be found (aspen woods, open areas, etc.). A trip to Vermilion Lakes with this list as a companion to standard field guides would provide the novice with a valuable learning experience.

The annotated list of birds is somewhat limited by an abundance scale which does not allow for "accidental" species. The authors would have found classification easier and more accurate had they used as a model the "Check-list of the Birds of the Calgary Region" abundance scales (rather than "Birds of the Rosetown-Biggar District, Saskatchewan). Several species could have more appropriately been listed as "Accidental" (recorded but due to normal range not expected to occur again) and "Rare" (known only from a single or occasional record).

The annotated list of mammals is both readable and informative. The nine maps are especially helpful. Equally interesting is the

three-page section on reptiles and amphibians. The one-page treatment of fish consists of species present in First, Second and Third Lakes, with no additional data.

"Vermilion Lakes" represents a useful addition to written material available about the natural history of the Canadian Rockies. The authors have successfully straddled the fence - the resultant work is of value and interest to both the casual, amateur naturalist and the serious student.

THE LETHBRIDGE NATURE RESERVE FIELD GUIDE

1978. Lethbridge Naturalists' Society. 20 pp. Free.

Reviewed by Virginia Lang

This slim field guide is intended to aid teachers taking their classes out on environmental field trips in the 196-acre Lethbridge Nature Reserve, and to help the general public who enjoy the area and want to know more about it. It is "designed to give only a brief insight into the area".

The highlights of this guide are the sections "A Brief Social History of the Riverbottom at Lethbridge" (p. 4-6) and "Landforms of the Valley of the Oldman River" (p. 7-8). An adequate map is provided.

The written material and check-list of vegetation is confusing and disappointing. It appears each section was written by persons who did not read the companion sections. In one case, the text (p. 12) says to look for patches of death camas or old man's whiskers on north-facing slopes. But I find neither on the plant check-list.

The written section on birds is not always easily understood. On page 14 I am told "During the summer breeding season, as many as 20 species may be found in a couple of hours in the Nature Reserve and Indian Battle Park. One of the best areas at present is the south end of the Nature Reserve just north of the CPR Bridge. This area has a number of older cottonwoods which are generally poor places to find birds though Baltimore Orioles sometimes nest in them. . ." Confusing, to say the least. The bird check-list would have greatly benefitted from a careful proof-reading, especially by someone familiar with the 1973 AOU name changes. The check-list is alphabetized, therefore difficult to use in conjunction with the suggested field guides. However, no amount of looking in your field guide will produce data on the "Red-breased Milhatch" anyway.

"Lethbridge Nature Reserve Field Guide" serves the intended purpose, "to give brief insight" to the novice, adequately but is of limited value to the serious student.

A NEST OF RICHARDSON'S OWL

by A.D. Henderson
Peace River, Alberta

Submitted by N.G. Kondla, FROM The Oologist, Vol. XXXV, No. 5, May 1, 1918.

"Of all the pleasures which fall to lot of the Oologist in the pursuit of her favorite study it seems to me that none compare with that of taking the nests of the early breeders such as some of the owls, the Canada Jay, or the Goshawk. So tie on your snowshoes some crisp March morning and sally forth into the woods in quest of the nest of the Great Horned Owl and his relative. The Great Gray is to my mind more enjoyable than any other period of the collecting season. It signifies that the long winter is nearly over and that there is three months of good collecting ahead.

Accordingly in the early spring of 1915, I renewed my search for a nest of the American Hawk Owl which up till then had been unsuccessful and one day towards the end of March, Charlie Ritchie, a young friend of mine told me he had found a nest in a musky, a few hundred yards from his home. On March 31st I went up to investigate and in a tamarac or spruce stub was shown an old nest of the Flicker. On rapping the stub with a stick an owl put its head out of the hole. At first I thought I had found the long sought nest of the Hawk Owl but identified it later as Richardson's Owl.

April 2 was a find spring day and gathering together my collecting outfit of camera, climbing irons and belt, egg box, a small hunting axe, a saw, some baling wire and a few nails I started out to take the nest. The first proceeding on arrival was to see if the bird was at home and a few raps on the stub soon brought her head to the hold as shown in the picture.

Next I cut three dry spruce poles and binding the ends together with wire, erected a tripod of such height that by climbing cross pieces nailed to the side farthest from the nest I could use my camera and in the proper position to get a good picture at this distance of about six feet. This is the method I always use in photographing nests which cannot be snapped from the ground and are not too high up to be reached in this manner. It is especially useful for all birds which breed in cavities or in large willow bushes such as we have in Alberta.

Having made already, I climbed to the proper position on the tripod and focused my camera. A rap on the stub brought the owls head to the hold and picture. Not one was secured. Putting on my climbing irons and belt I then climbed the stub and sawed out a section from the side to expose the interior of the nest to view.

While I was doing all this work the sitting bird made no attempt to leave and I could handle the eggs under her and touch her as I pleased. The only demonstration she made was in clicking her bill, owl fashion, and lightly pecking my hand. Mrs. Richardson was one of the gentlest

little birds I ever met. When I had finished cutting out the nest I climbed down the stub and mounted the tripod again and secured picture number two and then picture three after my friend succeeded in scaring the little owl from her treasures at last.

There were four freshly killed mice in the nest, three of them partly eaten and one untouched. This would seem to show that the sitting bird was fed by its mate.

The nest was about fifteen feet from the ground and the cavity about ten inches deep, lined with fine grasses, both green and dry gathered from the muskeg. There were three perfectly fresh eggs in the nest, most likely an incomplete set. In size they were between those of the Hawk Owl and the Saw Whet. These eggs are now in Mr. Barnes' collection and were secured near Belvedere, Alberta.

Although I did not secure the nest of the Hawk Owl that I expected, I was even more pleased to add this record to my collection experiences, especially as the very next day I was fortunate enough to find two nests of the Hawk Owl in two other little muskegs in the hills and later on, still another. However, I must reserve a description of these nests and the accompanying pictures for a future article if the editor permits."

OVERHEARD. . .

"A town is saved, not more by the righteous men in it than by the woods and swamp that surround it. A township where one primitive forest waves above while another primitive forest rots below, -- such a town is fitted to raise not only corn and potatoes, but poets and philosophers for the coming ages. . . "

Thoreau

LETTERS TO THE EDITOR

May 16, 1978

RE: Helen Schuler's obituary (Alberta Naturalist 8: 43-46, March 1978)

This was an impressive and well-written account of Helen's personality and achievements and I wish to congratulate you for publishing it.

I was surprised that no mention was made of Helen's maiden name, especially since she was the daughter of a well-known naturalist, who kept bird records for most of his lifetime including Saskatchewan "firsts" for several species, and was President of the Saskatchewan Natural History Society. Enclosed is the obituary of Helen's father, Steve A. Mann, published in Blue Jay 27: 122-128, 1969.

Helen was also a member of the executive of the Saskatoon Natural History Society in its early years, when she was an instructor in the College of Nursing at the University of Saskatchewan.

Knowing of Helen's hopeless illness, Mary and I went to Lethbridge last June for a last visit. Though very thin and tired, she still had her famous sense of humour and amazing courage.

Yours sincerely, C. Stuart Houston

(Editor's Note - I offer apologies to Dr. Houston for misplacing this letter, which should have been published in the September issue of AN.)

October 10, 1978

RE: Willmore Wilderness playground

According to the Alberta Wilderness Association a consultant has been hired by the Alberta Government to study the feasibility of creating another Kananaskis type playground in the Willmore near the Grande Cache area. This will benefit Grande Cache by providing an alternative means of revenue as at present it is solely dependent on coal.

Apparently, yet another downhill ski resort is possible and we may see more loop roads from Rock Lake to Grande Cache and from Ptarmigan Lake to Grande Cache.

This is disturbing news as only a year ago the Willmore was classified as class one, prime protection zone. Although downhill skiing is permissible in this zone, surely not resorts and alpine villages. The Willmore is one of our few remaining wild areas and it is uncomfortably close to the riding of a very influential politician. If you care about the Willmore, please let your Government know your

views on this issue.

Regards, Dorothy Broadbent, R.R. #4, Red Deer, Alberta

August 1, 1978

Dear Ms. Lang,

I read with regret such a letter as that published in your magazine Vol. 8 No. 2, June 1978, from Dorothy Broadbent.

As a non-native species of mammal, I wonder if I would be shot by Ms. Broadbent if seen on her land. Having myself contributed to the decline of the bluebird and other native species of bird by reproducing and competing for land, throwing out tons of garbage every year and polluting our waters with disinfectants, etc., I find it difficult to judge another species which is successfully competing for space.

The house sparrow and starling may have been introduced but like many worse evils we must learn to adapt and live with them. I find the thought of Ms. Broadbent sitting in grainfields for hours rather ludicrous - she could have used her time more profitably elsewhere helping to solve other problems. As for the magpie extending its range - should every green heron, bobolink or snowy egret extending its range be shot because it is competing with other birds? Come on, naturalists, let us police our imaginary range lines and shoot any bird we don't like as it crosses into new territory.

As a naturalist I respect the life and death struggles that occur in Nature. If we as naturalists, endorse the slaying of some species where will it end?

Yours sincerely, Dr. Anthony Johns, Sandra Johns, c/o Dept. Physiology, School Medicine, U. of Saskatchewn, Saskatoon, Sask. S7N OWO.
*Copy sent to CNF Conference, PEI, 1978.

(Editor's Note - I find the Johns' reference to Dorothy's use of her time untenable, for anyone who knows her will attest to the seemingly endless energy she invests doing what the rest of us all mean to get around to one of these days - writing politicians, attending hearings and meetings, actively contributing to conservation and natural history.)

OVERHEARD. . .

"Life consists with wildness. The most alive is the wildest. Not yet subdued to man, its presence refreshes him. . ."

Thoreau

FAN NEWS

FAN WINTER MEETING, CAMP CAROLINE

The winter meeting of FAN will be held in the beautiful forest setting of Camp Caroline on January 12, 13 and 14. Registration will be at seven pm on Friday evening. Camp Caroline is situated 3½ miles south of the village of Caroline.

The theme of the week-end will be Forest as Habitat, with speakers, nature films, outdoor skiing, hiking, and an indoor pool as added incentives. Potential speakers are Ed Telfer, CWS, "Forest as habitat for birds and mammals", and Yasu Hiratsuka, CFS, "Forest as habitat for fungi".

Dormitory accommodation is offered, so bring your sleeping bag. The rate structure is: $35 for adults, or $65 per couple; $30 for students; $25 for children ages 13 to 17; $20 for children 8 to 12; $15 for children 3 to 7; children under 3 free.

Please register by December 20. A $10 deposit is required. Contact: Federation of Alberta Naturalists, Box 1472, Edmonton, Alberta, T5S 2N5.

Submitted by Maxine O'Riordan

NATURE WALKS AT CAMP CAROLINE

Maxine O'Riordan and Mary Lore of the FAN Executive prepared material for eight nature walks with young campers at Camp Caroline in July. About one hundred Grade IV and V boys and girls were involved for a three to four hour walk daily. A new group went out each day. The counsellors who attended and the children seemed most interested and seemed to enjoy and appreciate many aspects of nature. Few animals or birds were actually seen due to the time of day and the chatter factor along the trail, but there are many pretty places at Camp Caroline and it is an excellent place to study nature relationships, ecology and ponder and appreciate nature. About seventy blooming species of flowers were recorded as well.

Camp Caroline is having a nature trail developed for future use which leads to a nature centre and a picnic stop.

Submitted by Mary Lore

FAN FALCONRY POSITION PUBLICIZED

Several Alberta newspapers (including the Edmonton Journal, Red Deer Advocate, and Lethbridge Herald) carried the following story following the September FAN meeting in Edmonton:

"Falconry study sought. More research is needed if falconry is to be made legal in Alberta, the Federation of Alberta Naturalists decided during the weekend.

Though the federation has a policy opposing legal falconry, it is taking a second look, said director Pat Clayton.

'The policy is out of date, but until we have more information, we're not willing to take a stand one way or the other.'

Pro-falconry groups have had preliminary discussions with the Alberta government. Falconry is legal in British Columbia and Saskatchewan."

PRESIDENT'S PAGE

I would like to use this space to make brief mention of the recent conference held at the Banff Centre on The Canadian National Parks: Today and Tomorrow - Conference 11: Ten Years Later. The title for the conference is self-explanatory. It was extremely interesting to have that ten years perspective to judge progress; to measure success; to see how clearly articulated the relatively new ideas of the 1960's have become; to recognize how constant many of our National Park problems remain; and to examine new ideas, new problems and new solutions.

It would be impossible to attempt to summarize the proceedings; however, there were some general themes which did emerge. There was constant concern that National Parks not be considered in isolation. National Parks are not a substitute for the implementation of sound ecological principles everywhere else. Urban, rural and National Park policies are not necessarily mutually exclusive.

Ideas were put forward on such things as "eco-development", conservation education, "countryside" and "Everyman's right", the Swedish concept in which recreation may occur everywhere but preservation is very selective. The need was demonstrated for a citizens' advisory committee to Parks Canada; for much better environmental and technology assessment; and for "legal" as opposed to "policy" wilderness. There was general concern over the inability of the public to gain standing in the Canadian courts. And considerable discussion took place concerning the proposed new National Parks in northern Canada and the place within those Parks for traditional native land uses.

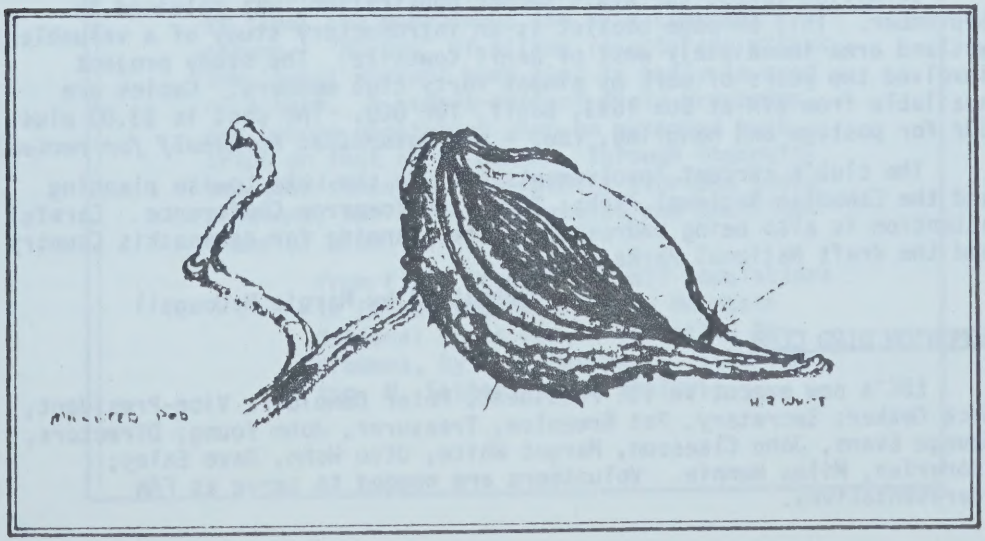
Early in the conference there appeared a very strong sense of pessimism about the future of National Parks and related reserves in view of the current economic situation. This was referred to as "the new reality". In other words, most people will be primarily concerned with the bread and butter issues and Parks will be seen as unaffordable luxuries which should be properly exploited. On the other hand there were those who stated, and I echo their words, that if, in fact, there is a new reality, then we are simply faced with a new challenge. There

may be difficult times ahead but we must all work that much harder to defend the ideals which we hold.

Countering the mood of pessimism about Canadian National Parks was the sense that there were some very exciting developments occurring at the international level through organizations such as the International Union for the Conservation of Nature and Natural Resources, and the World Heritage Convention which is an outgrowth of the Man and Biosphere program of UNESCO.

It is very important for me to mention that the Honourable Hugh Faulkner, Minister of Indian and Northern Affairs, and his senior Parks Canada officials, stressed the importance of the proposed revised National Parks Policy and the rather tight time constraints within which this matter is being considered. They are requesting public response to this document by the end of the year. I hope each member club and many individuals will find time to provide some positive input.

In concluding, I must tell you how proud I was of the FAN display at the conference. We were one of some forty-five exhibitors and thanks to the Bow Valley Naturalists who invited us to share their allotted space, we had a prime location, probably the best in the theatre complex. We had two tables covered with club publications, newsletters, briefs and literature on various subjects of interest. These were framed by BVN's slides and striking colour prints by Keith McDougall; FAN and Calgary Field Naturalist Society posters; and Lyman Matthews' display board holding the Alberta Naturalist editions of the last five years. It was a very impressive show by a relatively youthful organization and one which attracted a great deal of interest from conference participants.



CLUB NEWS

ALBERTA SPELEOLOGICAL SOCIETY

During the summer of 1978, A.S.S. lost a close friend and companion in Allistair (Bugs) McKeith, who died in an accident on Mt. Assiniboine in June. A whip-around for his wife and infant daughter was held in both Calgary and Edmonton.

Cadomin Cave was extended 1,000' over several expeditions this summer.

A caving trip to Moose Mountain Ice Cave was conducted for the May meeting of FAN, with about 20 members of FAN attending.

The newsletter has been revived and will now appear fairly frequently.

Pete Thompson, President, and Mike Boone are attempting to start a new, international caving journal.

Submitted by Maryhelen Posey

BOW VALLEY NATURALISTS

BVN's fall program included Bob Gamble speaking on the six new proposed northern National Parks, Ron Seale, Banff's new Chief Park Naturalist, speaking on Nahanni National Park, and a slide show of Dominica by Bruce and Ruth Gordon.

Vermilion Lakes, the BVN's second publication, was released in September. This 68-page booklet is an introductory study of a valuable wetland area immediately west of Banff townsite. The study project involved two years of work by almost forty club members. Copies are available from BVN at Box 1693, Banff, TOL OCO. The cost is $3.00 plus 50¢ for postage and handling. *(Ed. - see Naturalist Bookshelf for review)*

The club's current involvements include the Lake Louise planning and the Canadian National Parks: Today and Tomorrow Conference. Careful attention is also being addressed to the planning for Kananaskis Country and the draft National Parks Policy.

Submitted by Margie McDougall

EDMONTON BIRD CLUB

EBC's new executive is: President, Peter Demulder; Vice-President, Dick Dekker; Secretary, Pat Greenlee; Treasurer, John Young; Directors, George Evans, John Claesson, Margot White, Otto Hohn, Dave Ealey; Librarian, Miles Hennie. Volunteers are needed to serve as FAN representatives.

The Edmonton Bird Club Christmas Bird Count will be held on Sunday, December 7.

RED DEER RIVER NATURALISTS

In addition to the Annual General Meeting in Camp Caroline this coming January, the Red Deer River Naturalists has started a busy winter season.

Rudi Butot of Calgary presented a talk on "The Highways and Byways of southern Alberta" at the October meeting.

The new club President is Dorothy Broadbent, and the new Vice-President is Mike O'Brien.

OVERHEARD. . .

"Wolves exist in low densities. Field work, therefore, can be of a rigorous nature; that is, long hours spent in the field at times when it is often hot, wet or windy. Surroundings at times are monotonous and of a constant nature. 'Hordes' of biting insects can attack the 'sweat soaked' body that is badly in need of a bath. A staple diet of field groceries can become monotonous when on extended bush trips on foot or by canoe. Through ingenuity and good sense one can readily overcome these problems, but it takes practice and the right frame of mind. . ."

from Field Studies on Wolf Populations in Prince Albert & Riding Mountain National Parks for Interpretive Programmes, by L.N. Carbyn, W. Etherington, M. Sather and K. Whaley

CONSERVATION NEWS

LOCK 'EM UP

At the World Energy Conference meeting recently held in Banff, a number of scenarios were presented on the future of energy development. It was agreed that two major sources of energy expected to see vastly increased development are nuclear power and coal. It was further "acknowledged" that environmentalists would not be pleased with what might be happening in the energy field in the future.

People concerned with the environment seem to be a different class of human than those who feel charged with the responsibility of feeding the ever-increasing energy demand. A policy advisor of the World Energy Conference was reported (in the Edmonton Journal) to say that to get Friends of the Earth and other anti-development groups to see the need for new energy supplies they should be locked in a compound for about 18 months and provided with only limited supplies of heat and light, ie. at the level expected at the turn of the century if new energy sources are not provided.

Continued polarization of such issues prevents reaching compatible solutions. This case is just one example of the lack of credibility assigned to "environmentalists". It should be of some concern to naturalists who do not wish to be dismissed as "emotional environmental extremists", but who also do not want energy developers, amongst others, to disregard the consequences of their programs.

Submitted by David Ealey

ROW, ROW, ROW YOUR BOAT, GENTLY DOWN THE STREAM

At a wild rivers conference held in Jasper, the Minister of Indian and Northern Affairs, Hugh Faulkner, presented a proposal for establishing a 'protected river' status for some of the major rivers in Canada. Unfortunately, many of these rivers, which are as yet undammed, are also being coveted for the economic benefits derived for the North from their development as electrical energy sources. Strong public support for the protected river plan is necessary if future enjoyment of our beautiful wild rivers is to be ensured.

Submitted by David Ealey

THE ELORA GORGE - A BULLDOZE JOB

The Ontario Municipal Board has ignored the pleas of conservationists and has decided to approve an application to build a bridge over the world-famous scenic gorge of the Grand River. The fight has gone on for years and has cost conservationists between $20,000 and $25,000.

It has been taken to the Ontario Court of Appeal and almost to the Supreme Court of Canada. As a last resort environmentalists are appealing to the Ontario Cabinet to reverse the decision.

The Elora Gorge is famous for its great scenic beauty, surpassed only by Niagara Falls and the Niagara Gorge in southern Ontario. No need for a bridge has been clearly shown at this time, alternatives have not been studied and no environmental assessment has been carried out even though Ontario passed an Environmental Assessment Act three years ago. Since that time, only five requests for assessments have been approved and only one has reached public hearings.

As well as damaging the aesthetic beauty of the Gorge, the salt used on the bridge during the winter would severely effect the unique vegetation of the area. Obviously, this is another example of a political decision based on the best return for the dollars invested.

If you are concerned about the sacrifice of yet another one of our natural treasures, please voice your concern to the Ontario Premier, The Hon. William Davis, Q.C., Parliament Buildings, Queens Park, Toronto, Ontario.

Submitted by Dorothy Broadbent

WINTER MORTALITY OF ANTELOPE

This past winter, the severe snow and wind conditions resulted in the death of over half of Alberta's antelope. Most of these starved. Efforts to feed the antelope were not generally successful because the animals had difficulties digesting the forage they were unaccustomed to. The average annual mortality is about 25 per cent of the population.

Submitted by Sheila Pratt, from
"The News", Medicine Hat

THE MILK RIVER CANYON

The Milk River Canyon continues to concern Alberta environmentalists. This area of about 700 square kilometers of mostly crown-owned land has been preserved over the years because of the wise grazing policy of the Ross family, principle grazing leaseholders. The native prairie grasses and unique plants such as the Yucca Glauca, have been able to survive, because domestic cattle have been grazed in such a way that they have had no more environmental impact than the native buffalo.

The Ross family are long-time residents of the Milk River area, and they understand the climate and the land. At one time, they leased 150,000 acres and they grazed about one animal per 85 acres. New regulations have set a Provincial average of 55 to 60 acres per animal and one rancher cannot lease land that will support more than 600 head.

Part of the land taken away from the Rosses - about 17,000 acres in the southwest corner - will be proposed as an ecological reserve by

the Natural Areas Committee. The rest of the area will probably be broken up into small grazing leases and may suffer the same fate as the valley on the other side of the border. It is already scarred by seismic lines but it will be even more badly damaged if over-grazing is allowed to occur in this dry, sensitive region.

The Milk River Canyon is a good example of a region in need of the type of protection afforded by an ecological reserve. Unless the Provincial Government speeds up its approach to the question of ecological reserves, many such unique areas in this Province will be irreparably damaged before they receive adequate protection.

Submitted by Dorothy Broadbent

WOOD BISON TRANSPLANT FAILS

You may recall the much-publicized transfer last July of a small herd of wood bison to Jasper National Park. Wood bison, considered rare and endangered by the IUCN, occur in the wild only in one isolated region of the Northwest Territories. The transplant to Jasper National Park, an area used historically by the species, was the first attempt to establish another herd in the wild.

Unfortunately, the bison did not remain at their new home. Anticipating complaints from Grande Prairie area residents, CWS personnel rounded up the straying bison and returned them to Elk Island National Park. Of the twenty-one bison which left Jasper, the ultimate destination of two of them is the San Diego Zoo.

Submitted by Virginia Lang

SEAL HUNT QUOTA NOT REACHED

It is interesting to note that the Canadian Government's seal quota of 180,000 seal pups was not reached this year. After a one-week extension of the hunt, the final count of seal pelts was 149,578. The official excuse given this year was "the ice was too thick". Last year the excuse was "the ice was too thin". Could the real reason be that there aren't enough pups being born to keep up with ambitious Government estimates???

Submitted by Dorothy Broadbent

SUFFIELD RANGE FIRES PROTESTED

Of continuing concern in the Medicine Hat region are large fires occurring as a result of training in the Suffield Block military reserve. The Medicine Hat Fish and Game Association is eager to visit the range to determine whether wildlife and grassland are being unnecessarily destroyed. Although a Canadian Forces spokesman claimed that fire guards were being maintained and that efforts were being made to avoid harming wildlife and rangeland, the fish and game association

planned to further discuss the issue at their September meeting.

Submitted by Sheila Pratt, from
"The News, Medicine Hat

42ND FEDERAL-PROVINCIAL WILDLIFE CONFERENCE, QUEBEC, P.Q.

FAN was represented at the 42nd Federal-Provincial Wildlife Conference in Quebec, June 27-30, 1978, by Maryhelen Posey, FAN Director. Following is her account of the meeting:

Reports were presented by:
- Executive: Action taken on 1977 recommendations
- Ducks Unlimited: Waterfowl status report
- U.S. Fish and Wildlife Service
- Canadian Wildlife Service
- Canada Fur Council

Copies of these reports are available from the FAN Library.

Dates for subsequent conferences were set: 1979, Regina, June 26-28; 1980, Ottawa, June 17-19; and 1981, Charlottetown, June 23-25.

Use of Wildlife: Mr. Dan Poole, Wildlife Management Institute, Washington, D.C.

Mr. Poole concentrated on two aspects of wildlife use in the U.S., the question of ownership and control, and the controversy surrounding the protection of endangered species from "accidental" or "inadvertent" use. In the U.S., no wild animal has a legal owner; trusteeship of wildlife is vested in the Federal government, which has primary rights of regulation over use, though both trusteeship and regulation may be delegated. This not only simplifies coordination of wildlife management, but permits rapid change in regulations when the need is seen.

At the present, endangered species in the U.S. are protected not only from direct use (hunting, collecting, etc.) but also from indirect threats such as the recently much-publicised threat to the snail darter from a federal dam. This aspect of protection is the most controversial and hopes to maintain this protection rest entirely with the degree to which imaginative wildlife management can reach acceptable compromises with planning agencies such as USGS and the US Army Corps of Engineers. Since in his opinion the now-satisfactory protection of the snail darter and the dam plans is evidence that such a compromise is possible, the chief difficulty remaining lies in establishing procedures to ensure that the consultation necessary to such solutions occurs early enough for planning to be done economically.

Ownership of Wildlife: Panel

Mr. Patrick Therous, Attorney: The basic legal question of wildlife ownership in Canada is simple, though related issues are not. A wild animal belongs to no one until it is dead or captive, or so injured

that it cannot escape captivity. At that point it belongs to the person responsible for killing, wounding or capturing it. No rights of ownership accompany ownership of the land on which it is found. However, control over the conditions under which it is legal to kill, wound or capture a wild animal is vested partially in the Federal, partially in the Provincial governments, and the dividing line between them is not always clear. Similarly, control over the use to which one may put an animal of which one has become the owner is vested partially in these various governments. As a typical rule, in a particular province, outside Federal land, control remains with the Provincial government; in the territories and on Federal land, control remains with the Federal government. No statutory limitation exists on the controls which these governments can impose; hence, a captured or killed animal may be confiscated, or the conditions of maintenance of a captured animal specified, or the use of a carcass regulated.

Mr. Denis Nicholas, National Indian Brotherhood: The basic view of the executive of the NIB, as Mr. Nicholas expressed it, is that all wildlife in North America is the sole property of the native peoples, who have sole rights to regulate its use. In response to a question, he extended this ownership-control to species which have been introduced from other parts of the world. Repeated efforts to elicit reassurance that some recognition of the ultimate limitation on the supply of wildlife as food, fur, etc., existed among the NIB executive met with total incomprehension.

Mr. Eric Foster, Landowner: In the area of P.Q. where Mr. Foster lives, there is no crown land exclusive of road allowances, post office buildings, etc., and all wildlife lives exclusively on what provender is available on private land. This means that the official agents charged with enforcement of game regulations are distant, and landowners' associations are springing up to maintain some degree of control. These associations do not rely on specious claims to own the wildlife they support, but on their right to control access to their land for hunting purposes. In addition to specifying the conditions and costs of obtaining rights to hunt on local land, they have been, in the recent and past, accredited as game wardens with limited jurisdiction (and no external budget!), so that enforcement of the game regulations as well as trespass laws has been possible. This arrangement is under review at the moment. In addition to reducing the damage to crops and the threat to residents of the area caused by careless or hostile hunters from elsewhere, illicit takes and wounded but unpursued game have been decreased substantially.

WORKSHOPS

Conflict on uses of wildlife

This group decided to concentrate on possible sources of conflict, rather than attempting a list. Users were divided into three groups: voluntary removal (hunting, fishing, collection for scientific purposes, trapping, protection of public); involuntary or accidental removal of wildlife (by disturbance or disruption of habitat); and non-removal (photographers,

hikers, etc.). Conflicts are obviously possible between any two of these, within them, or between them and non-users of wildlife. Rather than attempt to structure a specific framework for approaching such conflicts, the group wished to stress flexibility, handling at the local level and maximum public participation in determining the nature and limitations of any particular conflict. It was emphasized that only if public participation is possible and known to be possible will such conflicts be identified at an early stage.

Who pays?

At present, in Canada, certain groups of users are supporting wildlife management directly, but the concept of user-pay must either be reduced in importance or extended by including those users who do not remove animals deliberately in the paying group to a more obvious degree. One problem here lies in the lack of data to show how many people actually do place value on wildlife, and what kinds of values wildlife represents to various sectors of the population. The group also approached the question of who is paid to maintain wildlife. Although they were reluctant to see anyone (besides themselves??) paid for this purpose, they acknowledged that wildlife consultants and landowners may be more important as paid managers of wildlife.

Current wildlife allocation process

At present a fairly clear priority system exists for permitting the removal of wildlife: native peoples, residents of the province, Canadians from other areas, non-Canadians (these for sport hunting, fishing). There is a great deal of variation in the relative priority assigned to commercial vs. sporting use. The recent trend has been toward greater local assignment of priorities.

Future wildlife allocation process

The group saw more questions than solutions. Data is urgently needed on actual use by the native peoples. A hunting or fishing license as a right to access to the sport rather than as a right to wildlife, though it is the present state of affairs, needs to be clarified, as it is widely misunderstood. The population hunting for subsistence must be better identified and the issue of "cultural history" as a defence of hunting rights more carefully elaborated.

Utilization of Wildlife: Panel

Mark Gordon, Inuit, James Bay: Concern for subsistence hunters must extend beyond acknowledgement of their needs, or even treating those needs as rights to hunt. It must take into account the ways in which they use the game they take, and involve education in the limitations of the resource so that they can become effective partners in establishing regulations. For instance, it was pointed out, the Migratory Birds Act imposes conditions on the Inuit which are neither understood nor

accepted, so they are systematically violated, and the function of the control vitiated as well as collection of valid data rendered impossible. Were the traditional uses of these birds by the Inuit considered in more detail, it might have been possible to establish more meaningful and acceptable controls which would be adhered to. That they would probably be adhered to if properly explained, he is convinced. He has participated in programs which have led to voluntary limitation of the hunting of cariboo, following explanation of the nature of the limitations on the herds. Mr. Gordon's was a very encouraging presentation, particularly in contract to Mr. Nicholas'. He clearly does see that wildlife resources are limited, and that in practice, other Canadians than the native peoples are going to claim (successfully) a cultural heritage in hunting. His concerns are with less black and white issues than Mr. Nicholas and he foresees the need for greater restriction on hunting for cultural reasons than did most of the fish and game members present.

Dr. L. Lemiex, National Museum of Natural Sciences: Discussed the value of the European system (especially Germany and Italy) of game management. A landowner actually owns the wildlife on his land, but is responsible to the government for its management. A management plan must be approved before land can be opened to hunters, who pay a fee for the right to hunt. Any kills remain, except for the trophy, to the landowner, who puts the meat on the market. Crown land is occasionally opened to hunting, under lease to a manager who has the same financial interest in good game management as the landowner would. The financial incentive to good management is coupled, in such a system, with variety in approach to management, which we find difficult in North America with management vested in government agencies. The profit-making nature of the hunting preserve, and the commercial value of the meat, make the economic value of wildlife clearer, and eases the problem of management outside such preserves. In addition, much less waste of meat occurs.

Col. D. Dailley, African Lion Safari, Rockford, Ontario: Col. Dailley wished to clarify the value of zoos, and the importance of natural habitat simulation in zoos. In particular, he wished to challenge the argument that television makes zoos redundant. I think it is a supportable position. Unfortunately, Col. Dailley did not support it very well. He appeared to believe that the audience was composed entirely of mildly retarded, moderately demented persons who would set dogs, cats, and goldfish loose if they could. It was a regrettable performance.

Biological Basis for Management of Harp and Hooded Seal, David Sergeant, Arctic Biological Station

Harp Seal: The present take (approximately 160,000; 120,000 young) is based on evidence of overall reduced herd size. Data is difficult to collect, so conclusions must be tentative. Natural mortality figures are based on collection, labelling, recollection, over one year. Population dynamics analysis of a sequence of such measurements lead to

general herd figures. 325,000 pups are now born annually; the maximum sustainable yield is probably around 375,000. With a quota of kills, virtually no natural mortality is observable between ages of 3 and 15 months. The justification for setting the very high quota on the take of young lies in their greater susceptibility otherwise. Very high first year mortality rates have been observed in periods when no sealing of harps was permitted. This take must be established for the very early period of a pup's life for two reasons: while his coat is obviously different from the adult's, the take can be more clearly restricted; and while the pup is still confined to the ice, accuracy of the kill is better, with fewer lost carcasses. Hooded Seal: Twenty years ago the hooded seal was considered seriously endangered, but now the population is increasing faster than all estimates. This is compounded by the fact that there is a systematic undertake of the 180,000 quota. The emphasis in the quota is being shifted to young animals for reasons similar to those elaborated for the harp seal.

James Bay Agreement, Cabriel Alain, Departement du Tourisme, de la Pêche, et de la Chasse

The emphasis of the talk was on the hunting and fishing aspects of the agreement, though mention was made of the social and medical services and educational clauses. Limitations have been established on the area in which non-native peoples may hunt and fish, on the species they may take, and in any quota allocation, a guarantee of first rights has been made to the native peoples. Remaining problems concern implementation, the native peoples wishing quick implementation, the provincial government taking a go-slow approach.

Impact of Recreationists on Wildlife, Parcs Canada (Morissie)

This talk was a replacement for Andy Russell. The speaker detailed the research in progress at Morissie on recreational impact on habitat; the design is painstaking and impressive, the contract obviously well-funded, the intent to complete it substantially before any expansion of facilities is undertaken. Morissie is in the shield, with many lakes and streams, and is primarily used by canoe parties with some cross-country skiing permitted in the winter. The contrast with the approach taken to the Sunshine development is painful. Queries to the speaker and his superior were evaded, but the speaker seemed startled at the information that the development related to alpine rather than nordic skiing.

Future Use of Wildlife, Pierre Desmeulles, Regional Director, Quebec, Canadian Wildlife Service

Sport hunting is likely to decline, because most hunters are rural people in an age range which will become a smaller portion of the population by 2000. The focus of hunting activity must change in parallel. The definition of success should be re-examined to emphasize the enjoyment of the activity, not the take, and hunting should become more difficult. The efficient use of the meat should be ensured, perhaps by a modification of the European system to retain the carcass, except the

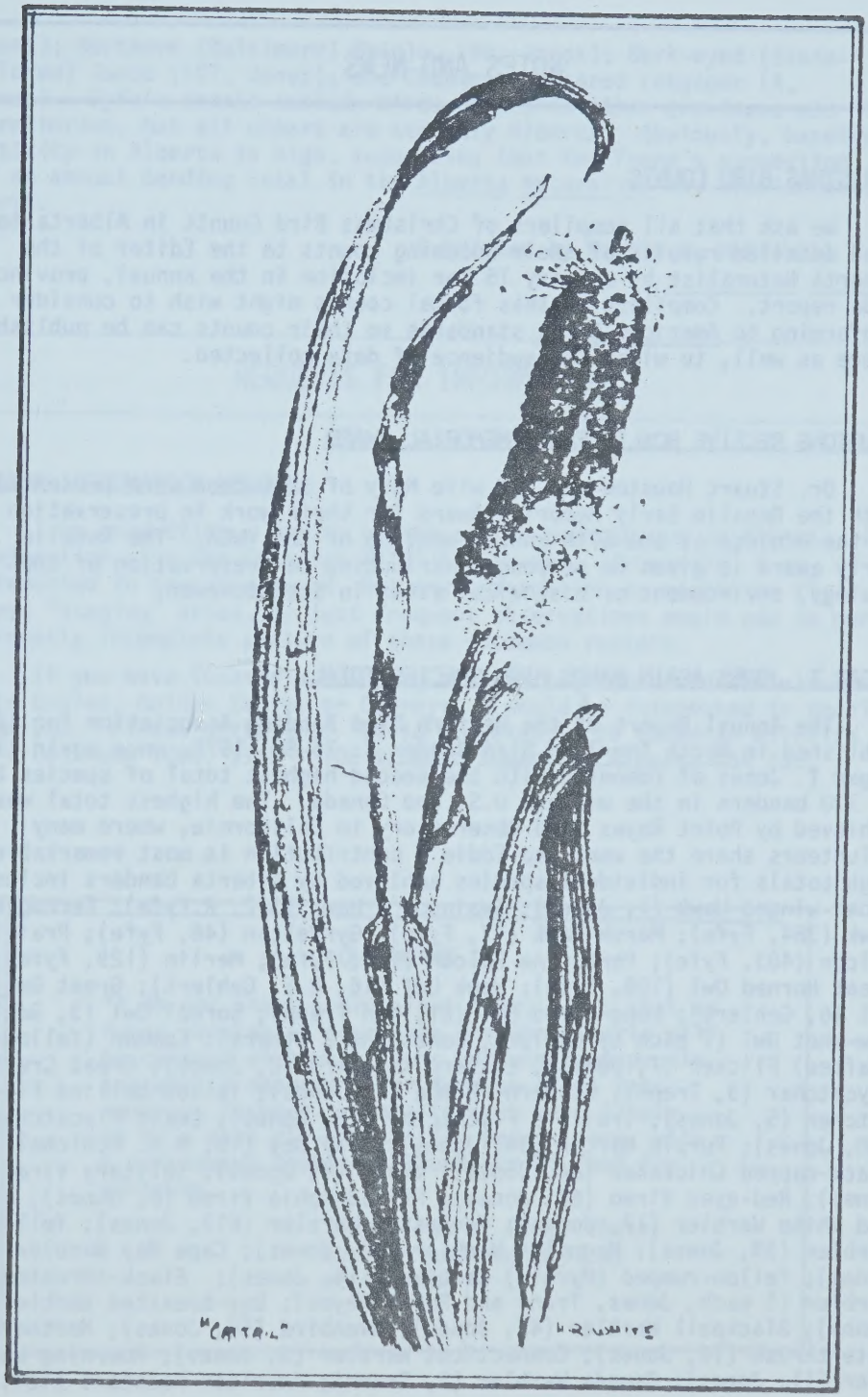
trophy, for sale, possibly in specialized restaurants. Hide, bone, fur, feathers, etc., should also be retained for commercial use (M. Desmeules would prefer for domestic use, not export!). These measures would permit wider familiarity with the useful products of hunting and spread the cultural benefits of hunting to the majority of the population who do not themselves hunt. In addition, consideration should be given to making sport hunters interested in the hunting of species now rarely hunted, but often destroyed as vermin, such as blackbirds, starlings, gophers, etc., which should also be regarded as potential food resources from hunting. This could be allied with plans to develop hunting methods which involve large numbers of persons in the activity but which result in only a single kill, such as modifications of fox hunting. It might be easier to protect some of our endangered raptors if we also valued them as a source of falcons for hunting; a modified revival of falconry could serve several useful purposes here, involving as it does great skill and close familiarity with the falcon's mode of hunting. Interpretive services must be aimed more at the general public than at the specialized groups which have been the focus of attention in the past, and the educational approach should foster emotional response to wildlife rather than the merely informational pattern of the present. This could go hand in hand with a greater appreciation of natural products of domesticated species so that as we learn the value and beauty of fur, down, hide, we also come to value wool, cotton or wood over synthetics. The increased accessibility of the products of the hunt referred to earlier would foster such appreciation in itself, and perhaps affect large enough segments of the public that we could develop a conscience to accompany our biological expertise and become more concerned with opportunities than with difficulties. At the same time, as we involve large portions of the population with wildlife, we can more rationally support a broadening of the user-pay concept of funding wildlife management. It will be clearer to what extent the public as a whole have an interest in contributing through general revenues, and user permits for campers, photographers (especially commercial photographers and outfitters) would become more clearly feasible.

Results of Inquiry: Who Owns Wildlife? Dr. N. Simmons, Fish and Wildlife Services, NWT

By contract with the U.S., the regulation of wildlife use in Canada is in confusion. The trusteeship concept as an alternative might be a useful means of beginning to reorganize the state of affairs here. It is not clear that our federal goal is as clear as that of the U.S., nor is it obvious that our provincial controls are always sound.

Theme for 1979 Conference Announced: Habitat

Recommendations: Available from FAN Library or Maryhelen Posey, following printing and distribution.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NOTES AND NEWS

CHRISTMAS BIRD COUNTS

We ask that all compilers of Christmas Bird Counts in Alberta to send detailed results of their upcoming counts to the Editor of the Alberta Naturalist by January 15 for inclusion in the annual, province-wide report. Compilers of less formal counts might wish to consider conforming to American Birds standards so their counts can be published there as well, to widen the audience of data collected.

HOUSTONS RECEIVE ROSLIE EARLY MEMORIAL AWARD

Dr. Stuart Houston and his wife Mary of Saskatoon were presented with the Rosalie Early Memorial Award for their work in preservation of the ecology at the 67th annual meeting of the YWCA. The Rosalie Early award is given to persons contributing to preservation of the ecology, environment or historical sites in Saskatchewan.

EDGAR T. JONES AGAIN BANDS HIGH SPECIES TOTAL

The Annual Report of the Western Bird Banding Association for 1977, published in North American Bird Bander 3: 76-88, 1978, once again lists Edgar T. Jones of Edmonton with the second highest total of species banded by 330 banders in the western U.S. and Canada. The highest total was achieved by Point Reyes Bird Observatory in California, where many volunteers share the work, so Eddie's contribution is most remarkable. High totals for individual species achieved by Alberta banders included: Broad-winged Hawk (1, Jones); Swainson's Hawk (362, R.Fyfe); Ferruginous Hawk (384, Fyfe); Marsh Hawk (17, Fyfe); Gyrfalcon (48, Fyfe); Prairie Falcon (403, Fyfe); Peregrine Falcon (120, Fyfe); Merlin (129, Fyfe); Great Horned Owl (109, Fyfe); Hawk Owl (16, R.E. Gehlert); Great Gray Owl (6, Gehlert); Long-eared Owl (21, Ken Trann); Boreal Owl (3, Gehlert); Saw-whet Owl (7 each by Gehlert, Jones and 2 others); Common (Yellow-shafted) Flicker (7, Jones); Eastern Kingbird (2, Jones); Great Crested Flycatcher (3, Trann); Eastern Phoebe (1, Jones); Yellow-bellied Flycatcher (5, Jones); Traill's Flycatcher (25, Jones); Least Flycatcher (30, Jones); Purple Martin (34, Jones); Gray Jay (16, M.K. McNicholl); Black-capped Chickadee (84, Jones); Veery (1, Jones); Solitary Vireo (8, Jones); Red-eyed Vireo (67, Jones); Philadelphia Vireo (6, Jones); Black and White Warbler (17, Jones); Tennessee Warbler (617, Jones); Yellow Warbler (39, Jones); Magnolia Warbler (32, Jones); Cape May Warbler (4, Jones); Yellow-rumped (Myrtle) Warbler (114, Jones); Black-throated Green Warbler (1 each, Jones, Trann and Point Reyes); Bay-breasted Warbler (4, Jones); Blackpoll Warbler (42, Jones); Ovenbird (55, Jones); Northern Waterthrush (16, Jones); Connecticut Warbler (3, Jones); Mourning Warbler (11, Jones); Canada Warbler (1, Trann); American Redstart (124,

Jones); Northern (Baltimore) Oriole, (82, Jones); Dark-eyed (Slate-colored) Junco (121, Jones); and Chestnut-collared Longspur (4, Jones). Fyfe's totals include birds banded in other provinces and territories, but all others are strictly Alberta. Obviously, banding activity in Alberta is high, suggesting that Ken Trann's suggestion of an annual banding total in the Alberta Naturalist has considerable merit.

Submitted by Martin K. McNicholl

REQUESTS FOR INFORMATION

RAPTOR INFORMATION NEEDED

I am conducting a survey of the eagles and ospreys in Alberta, in conjunction with the Canadian Wildlife Service. Primarily, I am interested in breeding areas, but any information on migration fly-ways, "staging" areas, or just frequent observations would add to our currently incomplete picture of these uncommon raptors.

If you have located a breeding area or have observed individual Bald Eagles, Golden Eagles or Ospreys, I would be interested in hearing from you. Please write to: David M. Ealey, c/o Canadian Wildlife Service, Room 1000, 9942 - 108 Street, Edmonton, Alberta T5K 2J5.

OVERHEARD. . .

"I do not share a prevalent fear,. . ., that as human population increases the whole world will be covered with vast towns because townspeople are wholly dependent for food on often less numerous farmers. There is much more likely to be a mass die-off of city populations, with a consequent temporary abundance of food for vultures. . ."

from Birds of Prey: Their Biology and Ecology, by H.L. Brown

JUNIOR NATURALISTS' PAGE

The Second Annual F.A.N. essay contest was a success again this year. Entry forms were sent to 300 schools; twelve schools responded with 121 essays. Students from Banff, Blindloss, Calgary, Cardston, Canmore, Killam, Lethbridge, Mossleigh, Medicine Hat and Red Deer participated. This year's winners are:

Wild Rose Category, Grades I and II (6 entries):

1. Lisa Schmidt, Calgary Gr. 2 Chief Crowfoot School, "Wild Rose"
2. Troy O'Hean, Canmore Gr. 2, Canmore Elementary, "Fireweed"
3. Katrina Morris, Canmore Gr. 2, Canmore Elementary, "Wild Rose"

Great Horned Owl Category, Grades III - VI (88 entries):

1. Carol Gehrke, Gr. 6, Mossleigh School, "Grizzley Bear"
2. Dan Bishop, Gr. 5-A, Canmore School, "Weather"
3. Leanne Hurl, Gr. 6, Mossleigh School, "Rocky Mountain Lion"

Helen Schuler Memorial Category, Grade VII to X (27 entries):

1. Daniel A. Morris, Gr. 7, Canmore Jr. High, "The Wolf"
2. Ulla Arvantes, Gr. 7, Banff Comp. High, "Rocky Mountain Bighorn Sheep"
3. Jeff Green, Mossleigh School, Gr. 8, "Rocky Mountain Lion"

TIE

3. Tamara Danyluk, Calgary, F.E. Osborne School, Gr. 8, "Big Horn Sheep"

Each issue of the Alberta Naturalist will feature two essays as a regular feature of the Junior Naturalists' Page.

ECLIPSES

by Cathy Turner
Grade 8, F.E. Osborne Jr. High, Calgary

Long ago, before people ever thought about studying the sky, they believed that in the event of an eclipse, a huge dragon was eating their sun. They beat their drums and screamed their lungs out, trying to frighten the dragon away.

Today, scientists see eclipses from an entirely different point of view. They understand the phases of the moon, and can relate them to the earth and sun. With this ability, astronomers can predict eclipses.

A solar eclipse occurs when the moon totally hides the face of the sun, causing the sky over the earth to darken. We can't see the sun when the moon travels in front of it because the moon is so much closer to the earth then the sun is, even though our fiery star is about four

hundred times larger than the moon.

A total eclipse blocks all view of the sun, while a partial eclipse hides only part of the sun, creating a "wedge". During an annular eclipse, the moon again shuts out all of the sun, but leaves a ring around its outside. This is opposed to the corona, or solar corona, which is a glow of bright light surrounding the moon during a total solar eclipse.

The lunar eclipse takes place when the moon enters the shadow of the earth. There are also eclipses involving other planets of our solar system and their satellites. Instead of labelling all these things "eclipses", we call the passage of one celestial body in front of a much larger body a "transit", and the eclipse of a little body by a much larger and nearer body an "occultation".

A total eclipse makes a narrow path across the earth, called the eclipse path. Only the area in this path can experience the eclipse. The width of the path as the moon's umbra travels from west to east never exceeds 270 km. However, in the places that witness only partial eclipse (regions covered only by the prenumbra) the area is much larger.

Astronomers cannot look right at the sun, or they will damage their eyes. They must fasten cameras to their telescopes and record the eclipses on film, or attach their cameras to small rockets which they launch. Spectroscopes can be used to observe the sun in different ways.

This is one of the advantages to the solar eclipse. While it takes place, observers can study in detail the corona and chromosphere of the sun without interference from its glaring light. Another advantage is that the stages of eclipses can be watched and recorded. The times recorded can be used in comparison with earlier forecasts of the eclipses. Their differences can help verify and strengthen theories about the movements of moon and earth.

A disadvantage is the fact that studies must be limited to the places where the eclipse is total. This takes astronomers out in airplanes, travelling to the remotest regions of the earth. Of course, there is the disadvantage of the total darkness during an eclipse, which not only frightens animals, but often takes people off guard as well. Also, much work and time must be put into the observations and equipment, as well as studying and care over the instruments used.

Solar eclipses, total or partial, occur at least twice, sometimes as many as five times a year. Because man has overcome his superstitions, the strange natural phenomenon of an eclipse is no longer a mystery.

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WESTERN HOGNOSE SNAKE

by Alan McMahon
Grade 7, Lethbridge

I. Appearance

Hognose snakes are very stout-bodied and have a short tail. The head is broad and the pointed snout is upturned in the case of the western snake. The western hognose is comparatively smaller than it's eastern cousin, seldom attaining a length of over two feet. These snakes are variable in color, but are commonly olive, brownish, or gray, with a pattern of darker blotches. Some specimens have some orange or reddish coloration. There is usually a row of large, dark blotches down the middle of the back and smaller ones along each side. The blotches on the body may be faint, but there is always a pair of prominent, large, elongate ones on each side of the neck. In the dark specimens, the blotching is obscure. The belly of the western hognose snake is usually black, with light areas along the edges.

II. Feeding

These snakes feed chiefly on frogs, toads, and mice, but occasionally eat lizards, insects, and salamanders. In the rear of the upper jaw are two fanglike teeth which puncture and deflate toads, (because toads puff up when attacked). The long teeth also aid in holding struggling prey. These snakes are not venomous.

III. Reason for Endangerment

These little snakes are becoming increasingly rare, as they have been wantonly killed because of mistaken beliefs resulting from their fearsome act. Some people even believe that their breath is poisonous and that it is capable of killing cattle - such a lie! Also, because of their stout bodies and triangular shaped head, bear a superficial resemblance to rattlesnakes; and this gives people still another excuse for killing these snakes, which are high among Canada's endangered list.

IV. Habitat and Reproduction

The western hognose snake is of scattered occurences in southwestern Manitoba, southwestern Saskatchewan and southern Alberta. It appears to be rare, but its relative secretiveness could lead to this conclusion. They prefer sandy places - beaches, light, dry woods, and the borders

of meadows and fields.

Hognose snakes, like most snakes, are oviparous - egglaying. The eggs, usually laid in dampish places, such as decaying logs, number from twelve to thirty and are laid from late June to August. The hatchlings are about seven inches long.

V. Defence and Protection

These harmless snakes are often called "puff adders", "sand vipers", "spread adders", and other dangerous sounding names. They are great bluffers and performers. When approached or cornered, a hognose snake will spread its neck like a cobra. This is done by means of an elongated ribcage that lies folded backwards when at rest. At the same time as it assumes the cobra-like appearance, it inhales deeply, inflating its stubby body. Then it exhales so as to produce a long, pronounced hiss. If threatened further, it will strike repeatedly but always with the mouth closed. It had never been known to bite. If, after this "ferocious" performance, one is brace enough to call the snakes bluff, it will roll over, shudder convulsively, and "play dead", with its mouth agape, and tongue out. If will remain this way until it is certain it can escape. However, if turned over, it immediately rolls in its back again and continues the act.

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Snakes of the World, John Stidworthy
Snakes of Canada, Barbra Froom

OVERHEARD. . .

The frog does not
Drink up
The pond in which
He lives.

- *American Indian Proverb*

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